Modern Aging Research, Volume 4

Comparative Pathobiology of Major Age-related Diseases: Current Status and Research Frontiers

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Alan R. Liss; New York 1984

xvi + 441 pages. £46.00

This volume is based on the proceedings of a symposium held at the National Institutes of Health, Bethesda in April, 1983. The twenty-four contributions are sub-divided into three main groupings: basic aspects of ageing, the mesenchyme and ageing and the ageing brain. With the exception of figures and tables, the papers are presented in a uniform, camera-ready format, each contribution being followed by an open discussion transcribed during the meeting. Although many pertinent points are raised in the post-contribution discussion, there also is recorded for posterity the tendency for participants to heap overly fulsome praise on the heads of contributors. This may have arisen from the pronounced national bias in the list of contributors, only one of the sixty-seven symposium participants having an academic affiliation outside the USA.

The volume covers an interesting range of topics associated with ageing, human and non-human, is thorough and exhaustive in approach. The section on basic aspects of ageing, which represents a number of view-points on possible 'causes' using different in vivo and in vitro experimental approaches, is well-documented but a reluctance to define the stage at which ageing commences is noticeable. For those of mature years the bulk of the material, on age-related, pathobiological changes in the mesenchyme, is a source of little comfort. By thirty-five years of 90% of the population can be expected to exhibit some form of periodontitis, over forty years an equal percentage has osteoarthritis affecting the weight-bearing joints, with atherosclerosis and diabetes mellitus to follow. In disease states showing a strong genetic component, indications of 'ageing' changes can be observed even in subjects of relatively tender years. Thus, while the clinical symptoms of hypertension commence in males and females at forty and fifty years respectively, the offspring of hypertensive patients may have elevated Na counter-transport or a significant reduction in Na-K co-transport by fifteen to twenty years of age. The picture drawn in the section on the ageing brain is equally bleak. Although the senile dementias generally have a later age of onset, becoming increasingly common after the 7th decade, their sequelae can be particularly harrowing. Some progress has been made in correcting the biochemical upsets and clinical picture in Parkinsonism, but the multifactorial nature of Alzheimer's disease and the shortage of appropriate disease models have inhibited its investigation.

Overall, the volume is well-produced with a comprehensive bibliography for each contribution and an excellent general index. For persons with a specialists interest in ageing, particularly in age-related pathologies, it can be recommended both as a source of information and of reasoned speculation.

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